

AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-18 (Canceled)

19. (Currently Amended) A method for reducing the visual impact of defects present in a matrix display comprising a plurality of pixels, said pixels comprising at least three sub-pixels, each sub-pixel intended for generating a sub-pixel ~~colour which cannot~~ color other than a color that can be obtained by a linear combination of the sub-pixel ~~colours~~ colors of the other sub-pixels of the pixel, the method comprising:

providing a mathematical representation of a human vision system by calculating an expected response of a human eye to a stimulus applied to a sub-pixel,

~~characterising~~ characterizing, by using a vision measurement system, at least one defect sub-pixel present in the display, the at least one sub-pixel intended for generating a first sub-pixel ~~colour~~ color, the defect sub-pixel being surrounded by a plurality of non-defective sub-pixels,

deriving drive signals for at least some of the plurality of non-defective sub-pixels in accordance with the representation of the human vision system and the ~~characterising~~ characterizing of the at least one defect sub-pixel, to thereby ~~minimise~~ minimize an expected response of the human vision system to the defect sub-pixel, and

driving at least some of the plurality of non-defective sub-pixels with the derived drive signals,

wherein ~~minimising~~ minimizing the response of the human vision system to the defect sub-pixel comprises changing the light output value of at least one non-defective sub-pixel intended for generating another sub-pixel ~~colour~~ color, said another sub-pixel ~~colour~~ color

differing from said first sub-pixel-~~colour~~ color.

20. (Currently Amended) A method according to claim 19, wherein ~~minimising~~ minimizing the response of the human vision system to the defect sub-pixel comprises introducing a light output deviation in at least one non-defective sub-pixel being part of the same pixel as said defect sub-pixel.

21. (Previously Presented) A method according to claim 20, wherein said light output deviation is similar to a light output deviation caused by the defect sub-pixel.

22. (Previously Presented) A method according to claim 20, wherein said light output deviation is such that a total light output of said pixel is substantially equal to a total light output of that pixel if it would not have any defect sub-pixels.

23. (Previously Presented) A method according to claim 19, wherein deriving drive signals for at least some of the plurality of non-defective sub-pixels furthermore is performed by incorporating a correction for at least one of a distance between said human vision system and said display, a viewing angle between said human vision system and said display and a presence of environmental stray light.

24. (Currently Amended) A method according to claim 19, wherein ~~characterising~~ characterizing at least one defect sub-pixel present in the display comprises storing ~~characterisation~~ characterization data ~~characterising~~ characterizing the location and non-linear light output response of individual sub-pixels, the ~~characterisation~~ characterization data representing light outputs of an individual sub-pixel as a function of its drive signals.

25. (Previously Presented) A method according to claim 19, wherein for calculating the expected response of a human eye to a stimulus applied to a sub-pixel, use is made of any of a point spread function, a pupil function, a line spread function, an optical transfer function, a

modulation transfer function or a phase transfer function of the eye.

26. (Currently Amended) A method according to claim 19, wherein when ~~minimising~~ minimizing the response of the human vision system to the defect sub-pixel, boundary conditions are taken into account.

27. (Currently Amended) A system for reducing the visual impact of defects present in a matrix display comprising a plurality of pixels, said pixels comprising at least three sub-pixels, each sub-pixel intended for generating a sub-pixel ~~colour~~ color other than a color which can be obtained by a linear combination of the sub-pixel ~~colours~~ colors of the other sub-pixels of the pixel, and intended to be looked at by a human vision system, first ~~characterisation~~ characterization data for a human vision system describing the image of a point source on a retina of said human vision system, said first characterizing data being provided by a vision ~~characterising~~ characterizing device having calculating means for calculating the response of a human eye to a stimulus applied to a sub-pixel, the system comprising:

a defect ~~characterising~~ characterizing device for generating second ~~characterisation~~ characterization data for at least one defect sub-pixel present in the display, the defect sub-pixel intended for generating a first sub-pixel ~~colour~~ color and being surrounded by a plurality of non-defective sub-pixels,

a correction device for deriving drive signals for at least some of the plurality of non-defective sub-pixels in accordance with the first ~~characterisation~~ characterization data and the second ~~characterising~~ characterizing data, to thereby ~~minimise~~ minimize an expected response of the human vision system to the defect sub-pixel, and

means for driving at least some of the plurality of non-defective sub-pixels with the derived drive signals,

wherein the correction device comprises means to change the light output value of at least one non-defective sub-pixel intended for generating another sub-pixel ~~colour~~ color, said another sub-pixel ~~colour~~ color differing from said first sub-pixel ~~colour~~ color.

28. (Previously Presented) A system according to claim 27, wherein the correction device comprises means for introducing a light output deviation in at least one non-defective sub-pixel being part of the same pixel as said defect sub-pixel.

29. (Previously Presented) A system according to claim 28, wherein said light output deviation is similar to a light output deviation caused by the defect sub-pixel.

30. (Previously Presented) A system according to claim 28, wherein said light output deviation is such that a total light output of said pixel is substantially equal to a total light output of a pixel if it would not have any defect sub-pixels.

31. (Previously Presented) A system according to claim 27, wherein the correction device for deriving driving signals is adapted for deriving driving signals incorporating a correction for at least one of a distance between said human vision system and said display, a viewing angle between said human vision system and said display and a presence of environmental stray light.

32. (Currently Amended) A system according to claim 27, wherein the defect sub-pixel ~~characterising~~ characterizing device comprises an image capturing device for generating an image of the sub-pixels of the display.

33. (Currently Amended) A system according to claim 27, wherein the defect sub-pixel ~~characterising~~ characterizing device comprises a sub-pixel location identifying device for identifying the actual location of individual sub-pixels of the display.

34. (Currently Amended) A matrix display device for displaying an image intended to be looked at by a human vision system, the matrix display device comprising:

a plurality of pixels, said pixels comprising at least three sub-pixels, each sub-pixel intended for generating a sub-pixel-~~colour~~ color other than a color that can be obtained by a linear combination of the sub-pixel-~~colours~~ colors of the other sub-pixel of the pixel, a first memory for storing first ~~characterisation~~ characterization data for a human vision system describing the image of a point source on a retina of said human vision system,

a second memory for storing second ~~characterisation~~ characterization data for at least one defect sub-pixel present in the display device, the defect sub-pixel being intended for generating a first sub-pixel-~~colour~~ color,

a modulation device for modulating, in accordance with the first ~~characterisation~~ characterization data and the second ~~characterisation~~ characterization data, drive signals for non-defective sub-pixels surrounding a defect sub-pixel so as to reduce the visual impact of the defect sub-pixel present in the matrix display device, said modulation device arranged to change the light output value of at least one non-defective sub-pixel intended for generating another sub-pixel-~~colour~~ color, said another sub-pixel-~~colour~~ color differing from said first sub-pixel ~~colour~~ color.

35. (Previously Presented) A matrix display device according to claim 34, wherein the first and the second memory are physically a same memory device.

36. (Currently Amended) A control unit for use with a system for reducing the visual impact of defects present in a matrix display comprising a plurality of pixels, said pixels comprising at least three sub-pixels, each sub-pixel intended for generating a sub-pixel-~~colour~~ color other than a color that can be obtained by a linear combination of the sub-pixel-~~colours~~ colors of the other sub-pixel of the pixel, and intended to be looked at by a human vision system, the control unit comprising:

a first memory for storing first ~~characterisation~~ characterization data for a human vision system describing the image of a point source on a retina of said human vision system,

a second memory for storing second ~~characterisation~~characterization data for at least one defect sub-pixel present in the display, the defect sub-pixel intended for generating a first sub-pixel ~~colour~~color and

modulating means for modulating, in accordance with the first ~~characterisation~~characterization data and the second ~~characterisation~~characterization data, drive signals for non-defective sub-pixels surrounding the defect sub-pixel so as to reduce the visual impact of the defect sub-pixel, said modulating means arranged to change the light output value of at least one non-defective sub-pixel intended for generating another sub-pixel ~~colour~~color, said another sub-pixel ~~colour~~color differing from said first sub-pixel ~~colour~~color.